

Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

Canadian Pacific Railway Limited (CP), owns and operates a transcontinental freight railway in Canada and the United States. CP's diverse business mix includes bulk commodities, merchandise freight and intermodal traffic over a network of approximately 12,400 miles, serving the principal business centres of Canada from Montreal, Quebec, to Vancouver, British Columbia, and the U.S. Northeast and Midwest regions.

CP strives to be a rail industry leader in environmental management and protection. We are committed to conducting our rail operations in an environmentally responsible and sustainable manner. This practice is the collective responsibility of our employees who's daily decisions and work help support clean railway operations that benefit the land, water and air in the communities where we operate.

The transportation sector accounts for the second most greenhouse gas emissions in both Canada (28%) and the United States (26%). Railways move approximately 70% of all freight on a tonne-kilometre basis in Canada but only account for 3.9% of the greenhouse gas emissions from the transportation sector. Despite this inherent efficiency, CP recognizes the importance of continuing to strive for improvements in our operations to drive down emissions of greenhouse gases.

Through our environmental management programs we make considerable efforts to improve operational efficiencies and reduce our carbon footprint. We employ innovative solutions supported by technological advancements and work with industry partners and government to maintain our leadership in this space and to further advocate for responsible stewardship of resources. CP has made significant improvements to rail operations in particular locomotive fuel efficiency, resulting in increased fuel efficiencies and reduced corresponding GHG emissions.

CC0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Fri 01 Jan 2016 - Sat 31 Dec 2016

CC0.3**Country list configuration**

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Canada
United States of America

CC0.4**Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

CC0.6**Modules**

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The CP Board of Directors provides oversight on responsibilities with respect to environmental issues including climate change.

The Board is provided with information on regulatory developments and emissions information with respect to climate change by on staff subject matter experts with in the Environmental Risk department.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Efficiency target	As one of their performance objectives, members of the corporate executive team are measured against the annual fuel efficiency targets which are set. These targets represent 95% of the company's Scope 1 emissions.
Management group	Monetary reward	Efficiency target	As one of their performance objectives, members of the Operations department are measured against the annual fuel efficiency targets which are set. These targets represent 95% of the company's Scope 1 emissions.
Other: Operations Employees	Monetary reward	Efficiency target Other: Behaviour change related indicator	As one of their performance objectives, members of the Operations department are measured against the annual fuel efficiency targets which are set. These targets represent 95% of the company's Scope 1 emissions. Employees responsible for running trains are monitored for performance against specific operations practices such as the use of dynamic braking over power braking which improves fuel efficiency in train operations. Monthly notices are issued on performance to ensure continued improvement.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	Canada and the United States	3 to 6 years	

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

In the normal course of our operations, we are exposed to various climate change risks and opportunities that can have an effect on our financial condition.

As part of the preservation and delivery of value to our shareholders, we have developed an integrated Enterprise Risk Management framework to support consistent achievement of key business objectives through daily pro-active management of risk and recognition of opportunities.

Company Level:

At the company level, potential climate change risks and opportunities are identified through an interdisciplinary approach involving a number of different departments. The Environmental Risk group monitors regulatory and policy developments at the international, national and state/provincial level to identify any changes that may either affect or present opportunity for the company with respect to climate change. Other developments such as carbon taxation systems may also involve Finance, Marketing and Sales and the Enterprise Risk Management group.

Notable developments are reported bi-annually to the Board of Directors as well as other company departments as required by the Environmental Risk group.

Asset Level:

Potential physical risks associated with climate change include damage to railway infrastructure due to extreme

weather effects, (e.g. increased flooding, winter storms) are identified and evaluated by Engineering. Improvements to infrastructure design and planning are used to mitigate the potential risks posed by weather events. Canadian Pacific maintains flood plans, winter operating plans, an avalanche risk management program and geotechnical monitoring of slope stability.

CC2.1c**How do you prioritize the risks and opportunities identified?**

Each risk or opportunity identified is assessed and prioritized based on the potential impact and likelihood, taking account of financial, environmental, and reputational impacts, and existing management control. Risk mitigation strategies are formulated to accept, treat, transfer, or eliminate the exposure to the identified events or to take advantage of noted opportunities.

Risk assessments are conducted both at the company department level and the strategic corporate level.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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CC2.2**Is climate change integrated into your business strategy?**

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i) How the business strategy has been influenced:

CP's philosophy is that effective governance involves more than policies, procedures and protocols; it must be integrated into the everyday business practices of all those who work for CP. We believe that corporate sustainability creates shareholder value. It is a part of everything we do.

Information on climate change is identified by different groups within the company and then communicated as required.

ii) Examples of how the business strategy has been influenced by climate change include:

The Environmental Risk group monitors climate change related policy and regulatory developments (in 2016 this included - Canada - locomotive emissions regulations, Ontario and Quebec - Cap & Trade programs) and communicates these to senior management in potentially affected departments including Operations, Marketing and Sales, Finance and Taxation.

Engineering is responsible for evaluating changes to infrastructure and the related environmental factors such as water levels, avalanche risk, storm potentials, etc. This information is then relayed to planning teams that factor in capital upgrade requirements and operating strategies.

The company establishes annual fuel intensity targets that directly impact 95% of our Scope 1 greenhouse gas emissions. This target is one of our corporate key performance indicators and is based on extensive analysis including the information discussed above.

iii) What aspects of climate change have influenced the strategy:

Regulatory Changes: The most influential changes in regulations related to emissions from our locomotive fleet which represent 95% of our GHG emissions. However others include the introduction of carbon taxation systems and regulatory changes that affect our customers.

Need for Adaptation: The physical risks of climate change such as natural disasters, flooding, and extreme weather events require a continuous evaluation of our 12,500 miles of track and associated infrastructure. They influence our day to day operating plans as well as our capital planning process.

Opportunities for Sustainable Business: Over 25% of national greenhouse gas emissions come from the transportation sector. The movement of freight is critical to the national economy and CP believes that rail provides a sustainable alternative to other forms such as long haul trucking. As part of our strategy we promote the fact that modal shift to rail offers shippers the opportunity to move their goods in a less carbon-intensive manner.

iv) The most important components of the short term strategy that have been influenced by climate change.

Our short term strategy looks at initiatives in the next four years.

Locomotive Fleet Renewal:

Over the past two years we have acquired 42 new EMD SD-30 locomotives and 130 new EMD SD-20 ECO locomotives to help modernize our road locomotive fleet. These locomotives use older locomotive bodies and replace the engine with one that is 15-20% more fuel efficient than their predecessors and improve air pollutant emissions as well.

Operational Strategy:

In 2016, we continued to increase the length of trains in key product groupings which helps to reduce train starts, the number of locomotives required and increases network speed and productivity. All of this results in improvements in fuel efficiency (apx 2% improvement over 2015). A number of longer track sidings also came on line in 2016 which reduces the need for idling at train meets in single-track locations.

These initiatives all form part of our goals for improved network velocity and fuel efficiency.

v) The most important components of the long term strategy that have been influenced by climate change.

Looking further ahead we continue to explore alternative fuels for locomotive operations such as liquefied natural gas as well as new locomotive technologies.

vi) Strategic advantage over competitors:

CP's main competition for freight transportation in Canada and the U.S. includes other railways, trucking and barge companies. Our focus on climate change through improvements in locomotive fuel efficiency has allowed us to present a low carbon intensive option to remain competitive with other modes of transportation. In fact, on average rail is 3-4 times more fuel efficient than truck which offers shippers an opportunity to move their products with less greenhouse gas emissions. We continue to emphasize the need to improve our operational efficiency which will allow us to maintain this advantage into the future. This involves a continual review of operational plans, locomotive fleet sizing and renewal and exploration of alternative fuels such as liquefied natural gas.

We report on our progress, challenges and future plans involving climate change through our sustainability report, as well as through our company website, www.cpr.ca. Our website also includes a carbon footprint calculator that allows shippers to understand the difference in greenhouse gas emission between long haul truck and rail movements.

vii) The most substantial business decisions during the year were:

- \$1.18B in capital improvements to infrastructure to ensure an efficient network (adaptation and physical risks)
- Increased length and weight of trains to drive further efficiencies (improved fuel efficiency).

viii) How has the Paris agreement influenced CP business strategy:

CP is currently reviewing internal sustainability goals including the impact of the Paris Agreement on CP long term GHG objectives.

ix) Does CP use forward looking scenario analyses, including a 2degC scenario, to inform our business strategies and financial planning.

CP does regularly review business strategies and financial planning using forward looking analysis. The inclusion of impacts of climate change and regulatory developments such as the financial impact of carbon pricing strategies are inherent in our business risk development and financial review processes.

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price on carbon?

No, but we anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	Canadian Pacific is participating with other Class 1 railways in the US-Canada Regulatory Cooperation Council on greenhouse gas emissions in the rail sector. This involves direct engagement with	Exploring voluntary agreements to cover rail sector emissions in Canada and the United States between the Canadian and U.S. governments and the rail sector as represented by the Railway

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		policy makers from the US EPA and Transport Canada.	Association of Canada, the Association of American Railroads and individual member companies, including Canadian Pacific. The agreement will include a railway industry target for reduction in greenhouse gas intensity.
Energy efficiency	Support	Canadian Pacific is participating in a voluntary memorandum of understanding (2011-2015) on reducing locomotive emissions in Canada. Canadian Pacific is an active member on both the management and technical committees (chair) under the Memorandum of Understanding. This involves direct engagement with policy makers from Transport Canada and Environment Canada.	The agreement includes a target of reducing greenhouse gas emission intensity by 6% from 2010 levels by the end of 2015. This program was extended to the end of 2016.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Railway Association of Canada	Consistent	From the RAC website: "Environmental policies in Canada, at federal and provincial levels of government, are being developed in response to public demands for improved air quality, reductions in greenhouse gas (GHG) emissions and increased energy efficiency. Overall, Canada is faced with the challenge of reducing emissions	Canadian Pacific is actively engaged as members of the following relevant committees of the Board of Directors: Environment Committee and the Safety and Operations Management Committee. Through our participation in these committees we are engaged directly with the

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		<p>growth in a highly competitive global economy. At the same time, Canada's economic strength and community wellbeing must be assured. A key component in an environmental strategy must be the role the rail sector can play in reducing emissions associated with transportation activity. Currently, the transportation sector, the largest single source of GHGs, contributes 27 per cent of GHGs produced in Canada. Rail is well positioned as a solution to reducing GHG emissions associated with transportation activities. Canada's rail business moves 70 per cent of the surface freight on a tonne-kilometer basis but produces only 3 percent of transportation sector GHGs. Canadian rail is in a unique position to meet the challenge facing Canadian communities and industries by offering environmentally sustainable transportation today and into the future. Canada must encourage and enable an effective and sustainable transportation system to serve the nation and its regions. A system that enhances movement of freight and passengers by rail and continually strengthens Canada's and competitiveness is critical to our nation's economic well-being. Canada's Rail business has made a significant contribution to environmental sustainability in the past and it is well positioned to play an important role in the future. In an effort to management locomotive emissions, the RAC and its member railways entered into a Memorandum of Understanding with Transport Canada and Environment Canada. Under this agreement, the rail industry committed to greenhouse gas (GHG) reduction targets, on an intensity basis, for Class 1 freight railways, short line freight railways, intercity passenger rail, and commuter rail as well as efforts to reduce emissions of criteria air containments. The industry is ready to continue to work with governments, communities and other private sector partners to increase the sustainability of the Canadian economy."</p>	<p>association and support the position as described.</p>
Association of American Railroads	Consistent	<p>From the AAR website: "Expanded use of freight rail offers a simple, inexpensive, and immediate way to meaningfully reduce greenhouse gas emissions without harming the economy. On average, railroads are four times more fuel efficient than trucks. That means moving</p>	<p>Canadian Pacific is actively engaged as a member of the Environmental Affairs Committee. Through our participation on this committee we are engaged directly with the association and support the position as</p>

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		freight by rail instead of truck reduces greenhouse gas emissions by 75 percent. According to Environmental Protection Agency (EPA) data, freight railroads account for just 0.6 percent of U.S. greenhouse gas emissions from all sources and just 2.2 percent of emissions from transportation-related sources."	described.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Individuals that play a role in the engagement activities mentioned are responsible for communicating all actions and policy developments to senior management within the company. Activities are also reported to the Board of Directors to ensure consistency with the company's climate change strategy.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Intensity target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
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CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1	95%	3.3%	Other: kg CO2e/1,000 Revenue Ton Kilometer	2015	13.5	2016	No, but we anticipate setting one in the next 2 years	

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	6	No change	0	

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
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CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	100%	100%	

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

No

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
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CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	
To be implemented*	0	
Implementation commenced*	1	14596
Implemented*	0	
Not to be implemented	0	

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Transportation: use	During 2016 CP improved fuel efficiency by approximately 2% from 2015. The improvement was primarily a result of operational changes including increased locomotive productivity, operational fluidity and the advancement of the Company's fuel conservation strategies.	14596	Scope 1	Voluntary	0	0	1-3 years	Ongoing	Due to the competitive nature of this information, we do not feel comfortable releasing investment aspects of the initiatives.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory	Standards for locomotive emissions are set by the US EPA in the United States and shortly by Transport Canada in

Method	Comment
requirements/standards	Canada. These standards are the baseline and drive investment in locomotive overhaul emission kits, idle-reduction technology at purchase and other technological initiatives.
Dedicated budget for energy efficiency	A continuous goal of improving fuel efficiency is in place at Canadian Pacific. In order to support this goal we allocate funds for obtaining new equipment (e.g. locomotives, railcars, lubrication systems, software systems) and to promote fuel conservation programs in house.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	51, 64, 65, 66	https://www.cdp.net/sites/2017/66/2666/Climate Change 2017/Shared Documents/Attachments/CC4.1/CP-Annual-Report-2016.pdf	CP 2016 Annual Report: Report includes discussion of climate change on CP operations and reports fuel efficiency information which directly applicable to 95% of our Scope 1 emissions.

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	Carbon taxation systems are evolving at the provincial level in Canada. As of 2017, tax based systems are in	Increased operational cost	1 to 3 years	Direct	Virtually certain	Medium-high	Based on CP's normal annual fuel consumption within these Province's costs to comply with carbon tax	Canadian Pacific has created a tariff based system to address the impacts of carbon tax programs on operating costs.	The cost of management involves the manpower and IT costs to collect the carbon tax

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	place in British Columbia and Alberta. Paying costs associated with carbon taxes and cap and trade programs increases CP's operating costs. It is anticipated that these compliance costs could increase in the future as markets develop and additional Provinces implement a carbon taxation program to meet Canadian Federal requirements by 2018.						programs could add an additional \$10 to 30MM for locomotive fuel. Any potential increase in these charges would result in an increase in costs for fuel purchased for CP's operations.	Through CP's tariff program, we require all freight customers, with the exception of CTA regulated grain movements, pay a carbon tax surcharge per mile or container for movements within the applicable province. CP continues to monitor any regulatory developments with respect to an increase in the carbon tax and potential developments in other provinces.	surcharge as outlined as well as monitoring regulatory changes.
Uncertainty surrounding new regulation	CP is not currently regulated in Canada or the United States on emissions of greenhouse gases from locomotive operations. A potential regulation could	Increased operational cost	1 to 3 years	Direct	Very likely	High	The financial implications of such a regulatory instrument are difficult to forecast without specific details. Potential impacts could range from simple modifications to existing approaches which	CP Environmental Risk personnel monitor developments in locomotive emission regulations and are in regular contact with regulators in both Canada and the US on this matter. CP is	The cost of management involves work time and traveling costs to participate in discussions with the regulatory agencies for one FTE in the Environmental Risk group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	take the form of a cap, mandatory emission intensity levels or other similar requirement. This would have a direct impact the cost of delivering freight service to our customers. It could potentially require Canadian Pacific to implement costly modifications or purchase newly designed locomotives or alternative fuels.						may not increase the cost of business to the requirement for new locomotive designs, fuel types and associated infrastructure which could potentially result in significant costs to the organization.	actively participating in the development of a voluntary agreement on greenhouse gas emission from the rail sector with Transport Canada and the US EPA which would include an intensity target to be achieved within five years. By participating in this process we are better able to inform the process to ensure there is a balance between improvements in emissions and the cost of achieving those improvements. CP continued this participation in 2016 as part of the Regulatory Cooperation Council.	
Cap and trade schemes	Cap and trade schemes have been developed	Increased operational cost	1 to 3 years	Direct	Likely	Medium	Current estimates of the financial implications of	CP has been working with our fuel suppliers to	At this time the costs associated with

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	or are in the process of being implemented in two jurisdictions in which CP operates: Ontario and Quebec. These programs are expected to represent an increased operating cost for the company due to the amount of fuel consumed in these locations for locomotive operations.						these programs are approximately \$3-8M per year between the two provinces based on normal fuel consumption.	assure appropriate record keeping and management of fuel data to comply with program requirements. Management and application of these provincial cap and trade programs continues to be investigated and developed within the company.	management are anticipated to be between \$1-3M per year, however as the full scope of these programs develops it is anticipated that costs may increase.

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes	This is both a current and anticipated risk	Reduction/disruption in production capacity	Up to 1 year	Direct	Very likely	High	Using past floods as a predictor of	Improvements to infrastructure design and	Upgrading the network rail infrastructure

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
and droughts	<p>for CP which is felt throughout the network but focused in floodplains or in areas that present unique risks such as snow avalanche, landslide or subgrade failure. Experience over the past several years has shown the impact of these natural events and their capacity to affect CP's operations.</p>						<p>future potential cost, without adaptive measures to manage this risk, major outages on the main line due to flooding can significantly affect revenues. The 2013 floods resulted in a decline in revenues in the quarter of 2% (\$25M), which serves as an estimate for future floods.</p>	<p>planning are used to mitigate the potential risks posed by weather events. The Company maintains flood plans, winter operating plans, an avalanche risk management program and geotechnical monitoring of slope stability. Numerous slope and bridge assessment and improvement projects take place annually across our network to improve flood resistance and decrease the chance of slope failures or bridge scour. The chance of and location of anticipated flooding is reviewed as the flood season approaches. Notifications are</p>	<p>is the most significant cost associated with this particular risk. Spending ranges from \$500-800M per year on this infrastructure.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								sent to the field to mobilize response resources and to move equipment out of flood-prone areas in advance as part of CP's flood plan.	
Change in temperature extremes	Extreme temperatures represent risks to railway infrastructure at CP. Track buckling, unacceptable levels of rail movement, increased frequency of broken rails, frozen switches and resulting need to replace track and equipment more frequently are all possible outcomes. Several of these can result in derailments or other incidents requiring shutdown of	Reduction/disruption in production capacity	Up to 1 year	Direct	Very likely	High	The most likely financial implication due to extreme temperatures is due to the increased risk of derailments which carry the cost of recovery and clean-up as well as disruption of operations and impact on reputation. In 2016, CP experienced instances of extreme temperatures on portions of the network. These temperatures were not known in	Track infrastructure is monitored on a regular basis both visually by our track inspection personnel but also through newer scanning technology that we have been acquiring over the last number of years. Such technology includes track evaluation cars, hi-rail trucks that measure track geometry and rail wear and ultrasonic rail detection. This technology identifies defects prior to in-service failure. Other wayside	Upgrading the network rail infrastructure is the most significant cost associated with this particular risk. Spending ranges from \$500-800M per year on this infrastructure.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	portions of the network exposing the company to financial risks.						advance as local weather forecasting capabilities had not predicted the full range of temperature that was eventually experienced.	technology is being acquired and installed to identify issues at the point of the wheel/rail interaction. Hotbox detectors along the rail network also record the ambient temperature at the rail surface. Work is underway to allow this information to be used more centrally in train operations planning. Extreme weather plans (Winter/Summer Plans) are built around the worst case scenarios for each season. They include potential changes to train design and infrastructure inspections.	

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	CP is exposed to commodity risk related to purchases of diesel fuel and the potential reduction in net income due to changes in the price of diesel. Fuel expense constitutes a large portion of our operating costs and volatility in diesel fuel prices can have a significant impact on income. Items affecting volatility in diesel prices include, but are not limited to, fluctuations in world markets for crude oil and distillate fuels, which can be affected by supply disruptions, geopolitical events and climate change related developments.	Increased operational cost	Up to 1 year	Direct	Very likely	High	Fluctuations in fuel prices affect the Company's results because fuel expense constitutes a significant portion of CP's operating costs. As fuel prices fluctuate, there will be a timing impact on earnings. In 2016, the impact of lower fuel prices resulted in a decrease in total revenues of \$178 million and a decrease in total operating expenses of \$100 million.	CP employs a fuel cost recovery program designed to automatically respond to fluctuations in fuel prices and help mitigate the financial impact of rising fuel prices. Fuel surcharge revenue is earned on individual shipments; as such, our fuel surcharge revenue is a function of our freight volumes. In addition, we manage fuel expenditures through a continual focus on fuel efficiency programs in our operating plan.	The short-term volatility in fuel prices may adversely or positively impact expenses and revenues due to fuel surcharge revenue as described.
Other drivers	As a Class 1 rail carrier, CP is required to accept	Reduced demand for goods/services	Up to 1 year	Indirect (Client)	Likely	High	CP's coal business represented approximately 10%	There are inherent limitations to the ability to manage	Potential costs of management would include

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	products for shipment that are offered for transportation under common carrier obligations. Certain products such as crude oil and thermal coal can present both reputation and longer-term economic risks. Environmental policy changes and public interest are expected to increase the pressure to reduce the use of these types of products which can impact these lines of business.						(\$606M) of total freight revenues in 2016, while crude oil was approximately 2% (\$138M). Reduction in the demand for these products or policy changes that restrict their use will affect these lines of business for the company.	any reputational risks due to the company's common carrier obligations. The risk of future reductions in the volumes of these products is managed in part through the diversification of our service offering and offset more recent commitment to increasing revenues through identifying new business lines.	the need to build new track or yard infrastructure to offer services to new customers.

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation

Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	The introduction of renewable fuel mandates in Canada and the United States has developed and continues to develop opportunities for the movement of renewable fuels on rail for CP which will increase demand for CP's services or potentially create demand for new business.	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	Medium	The increased demand for renewable fuels due to regulatory requirements has led to an increased demand for freight rail services to transport biofuel products. In 2016, biofuel revenues for CP were approximately \$185M.	CP Marketing and Sales proactively works with potential biofuel customers on a regular basis and we have strategically located personnel in key regions. Our rail line is situated in several active regions in the US Midwest.	There are no significant costs to managing this opportunity.

CC6.1b

Please describe your inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
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CC6.1c

Please describe your inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	We consider our inherent carbon intensity advantage over other surface modes such as long-haul truck to be a significant opportunity to increase revenues in particular portions of the business, most notably intermodal services. A significant amount of national greenhouse gas emissions in Canada comes from the transportation sector (roughly 28%), however freight rail only contributes 1% of that sector as a whole, despite moving a large amount of surface	Increased demand for existing products/services	Up to 1 year	Direct	Virtually certain	Medium-high	Based on 2016 revenues, Each 1% increase in intermodal business could contribute \$13M in additional revenues for the company.	This opportunity is managed through a renewed approach to marketing and sales within the company. Efforts have been made to improve efficiency for intermodal routes and to reduce the cycle times as a means of making the service more attractive to potential customers. Commissions for sales staff are being increased in frequency from bi-annual to quarterly to monthly in an attempt to incentivize increasing sales. CP also	Main costs associated with the opportunity include multi-million dollar improvements to intermodal facilities and improvements in IT systems to provide better tools for existing and potential customers.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	freight. According to an independent study by the Federal Railroad Administration, moving freight by rail is on average four times more efficient than transport by highway traffic with approximately 75 percent less greenhouse gas (GHG) emissions. Customers are continually looking at ways to improve on their carbon footprint in their supply chain which provides an advantage to CP through an increased demand for our freight service.							maintains an online GHG calculator tool for customer use in determining the potential for greenhouse gas savings in switching freight shipping from long-haul trucking to intermodal by rail services.	

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

The expected changes in physical climate parameters may indeed present some opportunities on a regional basis due to long term changes in land productivity, notably in the agricultural sector, however these will be offset by similar changes in other regions where productivity will decrease due to increased temperatures and reduced water availability. As a result the company does not expect substantive opportunities due to the changes in physical climate parameters.

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sun 01 Jan 2012 - Mon 31 Dec 2012	3399665
Scope 2 (location-based)	Sun 01 Jan 2012 - Mon 31 Dec 2012	104853
Scope 2 (market-based)	Mon 12 Jun 2017 - Mon 12 Jun 2017	

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
ISO 14064-1

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Not applicable

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fifth Assessment Report (AR5 - 100 year)
CH4	IPCC Fifth Assessment Report (AR5 - 100 year)
N2O	IPCC Fifth Assessment Report (AR5 - 100 year)
HFCs	IPCC Fifth Assessment Report (AR5 - 100 year)
Other: HCFCs (R-22)	IPCC Fifth Assessment Report (AR5 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
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Further Information

Emission factors for CC7.4 attached

Attachments

Page: CC8. Emissions Data - (1 Jan 2016 - 31 Dec 2016)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO₂e

2797461

CC8.3

Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We have operations where we are able to access electricity supplier emissions factors or residual emissions factors, but are unable to report a Scope 2, market-based figure	

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO₂e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
52507		

CC8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Purchased electricity in leased space	No emissions from this source	Emissions are not relevant		Data not available. Emissions are anticipated to account for less than 1% of total Scope 2 emissions.

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Halocarbon emission from US Operations	Emissions are not relevant	No emissions from this source		Data not currently being collected as part of US operations, emissions are anticipated to account for less than 0.001% of total Scope 1 emissions.
Propane consumption from US operations.	Emissions are not relevant	No emissions from this source		Data was unreliable and therefore excluded. It is anticipated to reflect less than 0.1% of total Scope 1 emissions.

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Data Gaps Assumptions	Carbon dioxide emissions for locomotive fuel which comprise 96% of overall scope 1 emissions were calculated assuming no biodiesel content, unless known. In reality the biodiesel content will vary from 0 to 5%, however the specific percentages are not provided by fuel suppliers. The result will be that carbon dioxide emissions for locomotive fuel will be 2-5% higher on average and the corresponding biological carbon dioxide emissions are 2-5% lower as reported. The methane and nitrous oxide emissions would be unaffected by this issue. Certain sources of off-road diesel are used in mixed service as far as the equipment consuming the fuel. Emissions were assumed to be for off-road mobile equipment in order to perform calculations. However it can be used for smaller equipment as well such as chainsaws, generators, etc. These volumes would be expected to be very small and the different in emission factor minimal thus resulted in a negligible impact on the overall reported total.
Scope 2	More than 2% but	Data Gaps	Scope 2 purchased electricity is based on monthly billing records collected and summarized by a third

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
(location-based)	less than or equal to 5%	Metering/ Measurement Constraints	party vendor. Not all billing is collected in this manner which then represents an under-reporting situation. This billing is anticipated to represent less than 5% of purchased electricity.
Scope 2 (market-based)			

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual	Complete	Reasonable	https://www.cdp.net/sites/2017/66/2666/Climate Change	PDF Pages	ISO14064-	100

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
process		assurance	2017/Shared Documents/Attachments/CC8.6a/078384-RPT-8-Verification Report CP 2016 GHG Report.pdf	23-25	3	

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/66/2666/Climate Change 2017/Shared Documents/Attachments/CC8.7a/078384-RPT-8-Verification Report CP 2016 GHG Report.pdf	PDF Pages 23-25	ISO14064-3	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
No additional data verified	

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Canada	2134544
United States of America	662907

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By GHG type
By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
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CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
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CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
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GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	2549434
CH4	3980
N2O	243672
HFCs	34
Other: HCFCs	58

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Locomotive Operations	2671356
On-Road Vehicle Fleet and Work Equipment	62830
Off-Road Equipment	41458
Heating	278
Propane (Canada)	3763
Natural Gas (Heating)	17593
Halocarbons	92

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Canada	33460		149624	
United States of America	19047		33424	

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 15% but less than or equal to 20%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Heat	0
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

10217523

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
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Fuels	MWh
Diesel/Gas oil	9964207
Biogasoline	976
Biodiesels	103
Motor gasoline	135233
Natural gas	99693
Propane	17300
Liquefied petroleum gas (LPG)	11

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor			

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
183048	183048				

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	5.2	Decrease	Total Scope 1&2 emissions in 2015 (x): 3,280,987 metric tonnes Total Scope 1&2 emissions in 2016 (y): 2,849,968 metric tonnes Difference (z) (Change in Emissions Calculation $x-y=z$): 431,019 metric tonnes % reduction (r) from 2015 to 2016 (Calculation $(x-y)/x * 100\% = r$) = 13% Of the 13% approximately 7.8% can be attributed to decrease in network rail activity (i.e. see GTM explanation in cc12.1a). Therefore the remaining 5.2% (13% - 7.8%) reduction in GHG emissions from 2015 to 2016 is attributed to improvements in locomotive fuel efficiency and rail operations improvements.

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Divestment			
Acquisitions			
Mergers			
Change in output	7.8	Decrease	Gross-ton Miles in 2015 = 263,344 (millions) Gross-ton Miles in 2016 = 242,694 (millions) Difference (Change in Output Calculation x-y=z): 20,650 GTM (millions) or 7.8% reduction in network activity.
Change in methodology			
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other			

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
.00046	metric tonnes CO2e	6232000000	Location-based	2.8	Decrease	Corporate fuel efficiency improvements due to emission reduction activities were approximately 2% resulting in less GHG emissions.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
21.1	metric tonnes CO2e	Other: Million Revenue ton-miles	135952	Location-based	1.8	Decrease	Corporate fuel efficiency improvements due to emission reduction activities were approximately 2% resulting in less GHG emissions.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance
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Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated				Information is not collected in a form that allows for calculation of emissions at this time.
Capital goods	Relevant, not yet calculated				Information is not collected in a form that allows for calculation of emissions at this time.
Fuel-and-energy-related activities	Relevant, not yet calculated				Information is not collected in a form that allows for

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
(not included in Scope 1 or 2)					calculation of emissions at this time.
Upstream transportation and distribution	Relevant, not yet calculated				Information is not collected in a form that allows for calculation of emissions at this time.
Waste generated in operations	Relevant, not yet calculated				Information is not collected in a form that allows for calculation of emissions at this time.
Business travel	Relevant, calculated	17014	Air Travel: Data on flight lengths are obtained from a 3rd party travel booking provider. This information is then classified into domestic, short and long haul and corresponding emission factors from the UK Department for Environment, Food and Rural Affairs (2015) are used to calculate the total GHG emissions. Air Travel (2015): 2,692 metric tonnes of CO2e. Car Rentals: The total mileage of each class of rental vehicle is provided by our third party travel management company. Then using the average km/L for that class, the litres of fuel consumed is derived and multiplied by the corresponding country emission factor for road gasoline. Car Rentals (2015): 1,918 metric tonnes of CO2e. Hotel Accommodations: Total hotel nights are obtained from our third party travel management company and then multiplied by an average emission factor for all hotel types obtained from "Hotel Energy and Carbon Efficiency Report, Brighter Planet (2012). Hotel Accommodations (2014): 12,717metric tonnes of CO2e.	100.00%	
Employee commuting	Not relevant, explanation provided				The contribution of this item is expected to be insignificant in comparison to other Scope 3 emissions such as

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					business travel.
Upstream leased assets	Not relevant, explanation provided				CP does not have any relevant upstream leased assets.
Downstream transportation and distribution	Relevant, not yet calculated				Information is tracked but associated emissions have not been calculated.
Processing of sold products	Not relevant, explanation provided				CP is a railway freight service provider and does not sell any products.
Use of sold products	Not relevant, explanation provided				CP is a railway freight service provider and does not sell any products.
End of life treatment of sold products	Not relevant, explanation provided				CP is a railway freight service provider and does not sell any products.
Downstream leased assets	Not relevant, explanation provided				CP does not have any relevant downstream leased assets.
Franchises	Not relevant, explanation provided				CP does not own or operate any franchises.
Investments	Not relevant, explanation provided				No material items in this category.
Other (upstream)	Not relevant, explanation provided				No material items in this category.
Other (downstream)	Not relevant,				No material items in this

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	explanation provided				category.

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/66/2666/Climate Change 2017/Shared Documents/Attachments/CC14.2a/078384-RPT-8-Verification Report CP 2016 GHG Report.pdf	pg. 23-25	ISO14064-3	100

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Business travel	Change in output	11	Decrease	reduced operational activity from 2015 combined with a reduced workforce resulted in a decrease in required business travel.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our customers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

Method of Engagement: Customers approach our customer account managers who in turn work with the Environmental Risk group to provide information on our climate change program and initiatives. Either a member of the Environmental Risk group or the customer account manager will also present the information directly to the customer at their offices.

Strategy for Prioritization: Prioritization is based on demand from customers.

Measures of Success: Measured based on timely response and any feedback received from the customer. Several CP customers engage CP annually in determining emissions associated with the use of our freight services.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
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CC14.4c

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
David Huck	Manager, Sustainability and Environment Systems	Environment/Sustainability manager

Further Information

[CDP 2017 Climate Change 2017 Information Request](#)